FEATURES

PETERMANN TECHNIK
Time & Frequency Components

- HIGH RELIABILITY FOR LOW COST
- SMALL DIMENSIONS
- AVAILABLE WITH SUPPLY VOLTAGE OF 2.6 VOLT
- LOW POWER CONSUMPTION
- NEW STANDARD FOR SMALL LOW COST SMD-VCTCXO'S AND SMD-TCXO's
- CHEAPEST AVAILABLE SMD-VCTCXO AND SMD-TCXO IN CERAMIC PACKAGE

SERIES	SMD-VCTCXO	SMD-VCTCXO-0507	
	SMD-TCXO	SMD-TCXO-0507	
PACKAGE		CERAMIC PACKAGE 7 x 5 x 1.9 mm	
FREQUENCY RANGE		10.000 MHz ~ 28.000 MHz	
STANDARD FREQUENCIES		10.000 MHz; 10.245 MHz; 12.800 MHz; 13.000 MHz;	
		13.5625 MHz; 14.400 MHz; 15.360 MHz; 16.800 MHz;	
		19.200 MHz; 19.440 MHz; 19.800 MHz; 20.000 MHz	
MAXIMUM OPERATING TEMPERATURE RANGE		-40/+85°C	
STANDARD OPERATING TEMPERATURE RANGE		-30/+85°C	
STORAGE TEMPERATURE RANGE		-40/+85°C	
SUPPLY VOLTAGE RANGE		2.6 ~ 5.5 VDC	
STANDARD SUPPLY VOLTAGES		3.0 VDC +-5% / 3.3 VDC +-5% / 5.0 VDC +-5%	
CURRENT CONSUMPTION		2 mA MAX. (LOAD 10 kΩ / 10 pF)	
INITIAL FREQUENCY ACCURACY		+-0.5 ppm @ 25°C +-2 °C	
FREQUENCY STABILITY	VS. TEMPERATURE	+-2.5 ppm max. (-30/+85°C refered to +25°C)	
	VS. AGING	+-1 ppm max. first year	
	VS. VOLTAGE CHANGE	+-0.3 ppm max. (3.0 VDC +-5%)	
	VS. LOAD CHANGE	+-0.3 ppm max. (10 kΩ +-10% / 10 pF +-10%)	
FREQUENCY CHANGE AFTER REFLOW		+-1 ppm max.	
OUTPUT LOAD		10 kΩ / 10 pF	
OUTPUT VOLTAGE		0.8 ~ 1.0 Vp-p MIN.	
OUTPUT SIGNAL		CLIPPED SINE WAVE	
FREQUENCY TUNING RANGE		+-4 to +-16 ppm	
FREQUENCY TUNING BY EXTERNAL VOLTAGE		1.5 VDC +-1 VDC (or depending the supply voltage)	
HARMONICS DISTORTION		-8 dBc MAX. (-12 dBc TYP.)	
PHASE NOISE		-120 dBc/Hz @ 1 kHz (-130 dBc TYP.)	
PIN CONNECTION	SERIES	SMD-TCXO-0507	SMD-VCTCXO-0507
	PIN 1	GROUND	VOLTAGE CONTROL
	PIN 2	GROUND	GROUND
	PIN 3	OUTPUT SIGNAL	OUTPUT SIGNAL
	PIN 4	SUPPLY VOLTAGE	SUPPLY VOLTAGE
	PIN 5	NOT CONNECT	NOT CONNECT
	PIN 6	NOT CONNECT	NOT CONNECT
	PIN 7	NOT CONNECT	NOT CONNECT
	PIN 8	NOT CONNECT	NOT CONNECT
DELIVERY FORM		TAPE AND REEL	
MARKING		JYEG + FREQUENCY	
MANUFACTURER		TJE / CHINA (ISO-9001/14001 qualified)	
ORDERING CODE FOR SMD-VCTCXO		SMD-VCTCXO-0507-FREQUENCY-T	
ORDERING CODE FOR SMD-TCXO		SMD-TCXO-0507-FREQUENCY-T	
OTHER PARAMETERS ARE AVAILABLE ON REQUEST / CREATE HERE YOUR SPECIFICATION			

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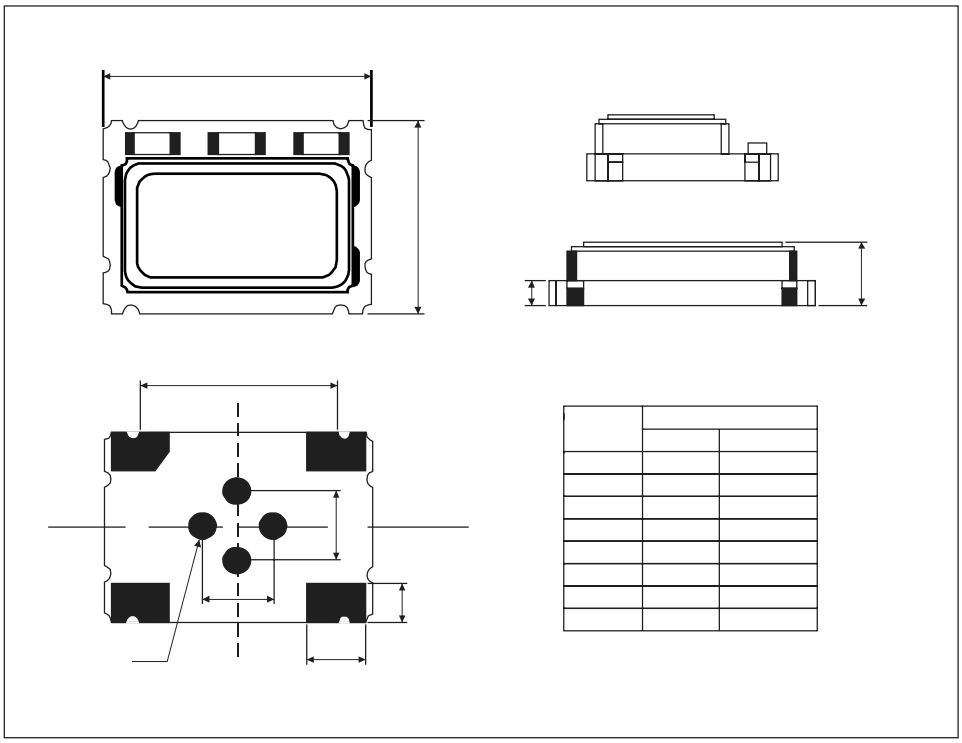
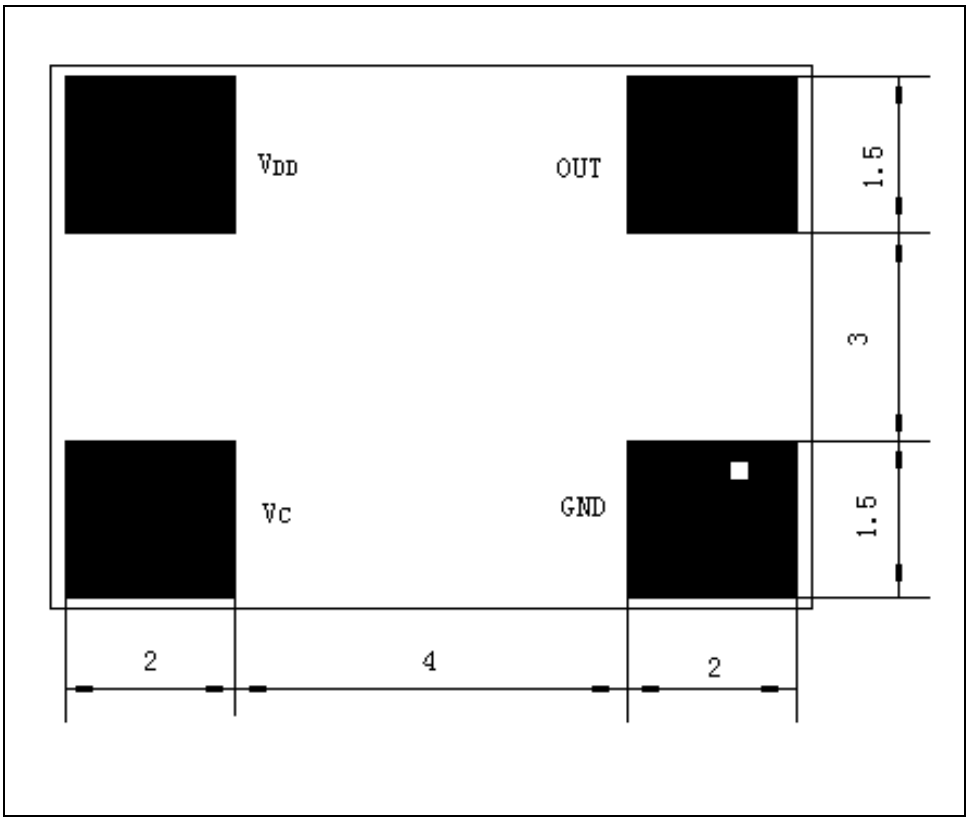
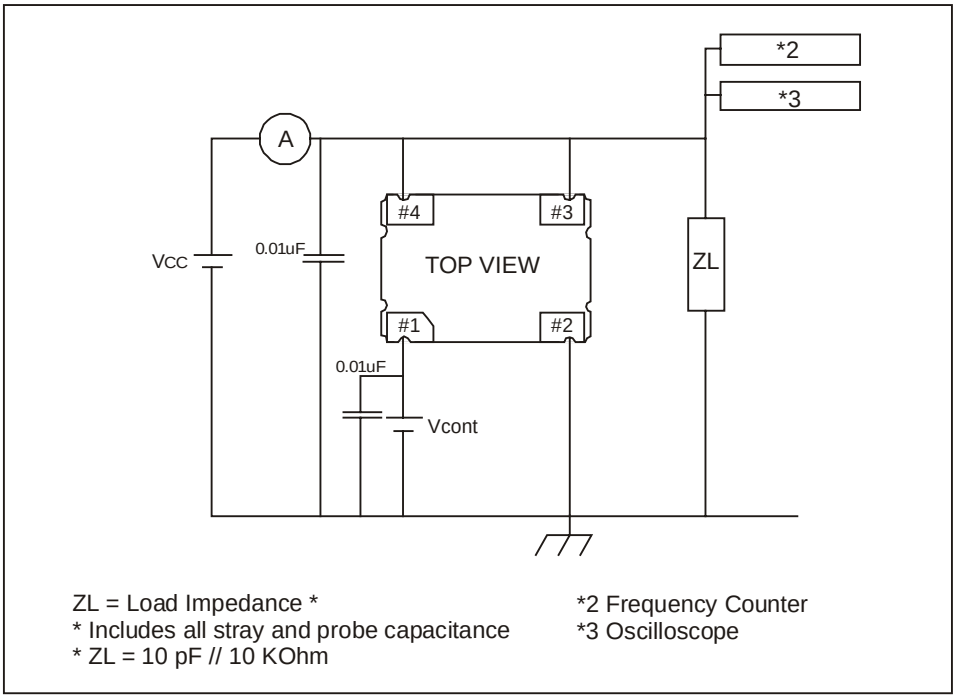


RECOMMENDED LAYOUT



TEST CIRCUIT



ZL = Load Impedance *
* Includes all stray and probe capacitance
* ZL = 10 pF // 10 KOhm

*2 Frequency Counter
*3 Oscilloscope

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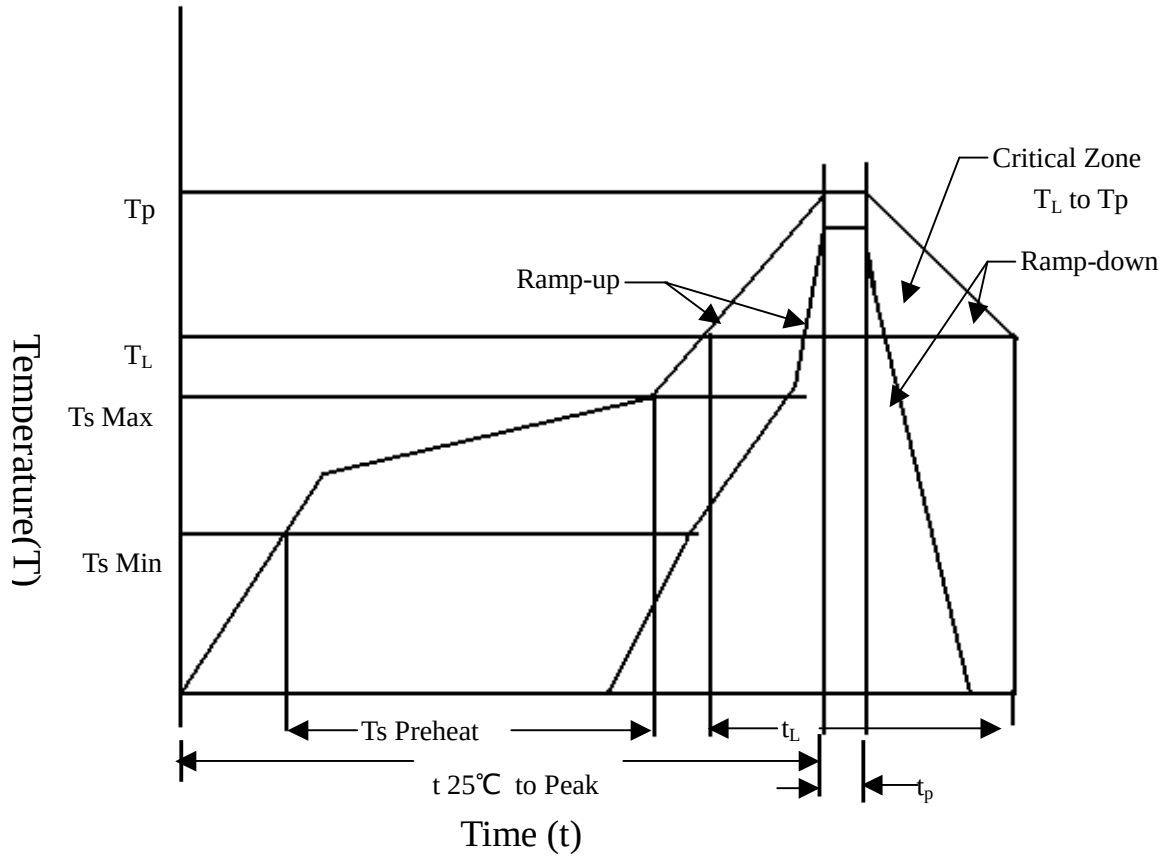
Solder Reflow Profile:



High Temperature Infrared /Convection

Note:Temperature shown are applied to body of device

Ts max to T_L(Ramp-up Rate)	3°C/second max.
Preheat Temperature Min(Ts Min) Temperature Typical(Ts Typ) Temperature Max.(Ts Max) Time(ts)	150°C 175°C 200°C 60-180 seconds
Ram-up Rate(T_L to Tp)	3°C/second Max
Time Maintained Above: --Temperature(T_L) --Time(T_L)	 217°C 60-150 seconds
Peak Temperature (Tp)	260°C max. for 10 seconds
Target Peak Temperature(Tp Target)	250°*C*+0/-5°*C*
Time within 5℃ of actual peak(t_p)	20-40 seconds
Ramp-down Rate	6°C/seconds Max
Tune 25℃ to Peak Temperature(t)	8 minutes Max
Moisture Sensitivity Level	Level 1

High Temperature Manual Soldering

Note:Temperature shown are applied to body of device

260°*C m*ax. for 5 seconds *m*ax., 2 times *max.*